

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Currently Amended) A patient monitoring system comprising:
 - (A) a non-invasive cardiac output sensor, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient;
 - (B) a multi-lead electrocardiogram (ECG) sensor, the multi-lead ECG sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient; and
 - (C) a patient monitor console, including
 - (1) an analysis module, the analysis module being coupled to the non-invasive cardiac output sensor and to the multi-lead ECG sensor, the analysis module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, and

(2) a display, the display being coupled to the analysis module, and the display ~~displays~~ configured to display the value pertaining to cardiac output and a plurality of ECG waveforms generated based on the ECG signals;

a communication interface capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located;

a plurality of additional sensors; and

a dial operator input device,

wherein the display displays a cardiac output parameter window that allows access to non-invasive cardiac output options and a plurality of additional parameter windows corresponding to parameters sensed by respective ones of the plurality of additional sensors,

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows, and

wherein, when the cardiac output parameter window is highlighted, and the dial operator input device is pressed while the cardiac output parameter window is highlighted, the display displays a plurality of cardiac output menu options, the cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to cardiac output to the operator and to receive inputs from the operator to adjust processing of the signal from the cardiac output sensor.

15. (Original) A system according to claim 14, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient.

16. (Original) A system according to claim 15, wherein the plurality of menu options includes an option that causes the patient monitoring system to test placement of the first and second electrodes on the patient.

17. (Original) A system according to claim 15, wherein the plurality of menu options includes a help option that causes the display to display help information describing proper electrode placement locations on the patient.

18. (Original) A system according to claim 15, wherein the plurality of menu options includes a help option that causes the display to display help information describing proper skin preparation prior to electrode placement on the patient.

19. (Original) A system according to claim 15, wherein the plurality of menu options includes an option to change a type of impedance waveform that is displayed to an operator.

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Previously Presented) A patient monitoring system comprising:

(A) a non-invasive cardiac output sensor, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient:

(B) a communication interface, the communication interface being capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located; and

(C) a patient monitor console, including

- (1) an analysis module, the analysis module being coupled to the non-invasive cardiac output sensor, the analysis module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, and
- (2) a display, the display being coupled to the analysis module, and the display displays the value pertaining to cardiac output,

a plurality of additional sensors; and

and a dial operator input device,

wherein the communication interface is capable of transmitting the value pertaining to cardiac output over the local area network;

wherein the display displays a cardiac output parameter window that allows access to non-invasive cardiac output options and a plurality of additional parameter windows corresponding to parameters sensed by respective ones of the plurality of additional sensors,

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows, and

wherein, when the cardiac output parameter window is highlighted, and the dial operator input device is pressed while the cardiac output parameter window is highlighted, the display displays a plurality of cardiac output menu options, the cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to cardiac output to the operator or to receive inputs from the operator to adjust processing of the signal from the cardiac output sensor.

29. (Original) A system according to claim 28, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient; and wherein the plurality of menu options

includes an option that causes the patient monitoring system to test placement of the first and second electrodes on the patient.

30. (Original) A system according to claim 28, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient; and wherein the plurality of menu options includes a help option that causes the display to display help information describing proper electrode placement on the patient.

31. (Previously Presented) A system according to claim 28, further comprising a multi-lead electrocardiogram (ECG) sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient, and wherein the display displays an ECG waveform generated based on the ECG signals.

32. (Original) A system according to claim 31, wherein the plurality of ECG signals include leads I, II, III, VI, V2, V3, V4, V5, V6, aVR, aVL and aVF.

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Previously Presented) A patient monitoring system comprising:

(A) a non-invasive cardiac output sensor capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient, the non-invasive cardiac output sensor comprising first and second electrodes;

(B) a multi-lead electrocardiogram (ECG) sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient;

(C) a blood pressure sensor capable of acquiring blood pressure information from the patient;

(D) a pulse oximetry sensor capable of acquiring pulse oximetry information from the patient;

(E) a carbon dioxide sensor capable of acquiring information pertaining to carbon dioxide content in respiratory gas of the patient;

(F) a patient monitor console, including

(1) an analysis module coupled to the non-invasive cardiac output sensor, the multi-lead ECG sensor, the blood pressure sensor, the pulse oximetry sensor, and the carbon dioxide sensor, the analysis module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, the analysis module producing the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient, the value pertaining to cardiac output pertains to a volume of blood pumped by the heart per unit time,

(2) a display coupled to the analysis module, and the display displaying the ECG waveform, the value pertaining to cardiac output, the blood pressure information, the carbon dioxide information, and the pulse oximetry information,

(3) a communication interface capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located, and

(4) a dial operator input device,

wherein, the display displays a plurality of parameter windows which respectively display the non-invasive cardiac output information, the ECG information, the blood

pressure information, the pulse oximetry information, and the carbon dioxide information;

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows; and

wherein, when the non-invasive cardiac output parameter window is highlighted, and the dial operator input device is pressed while the non-invasive cardiac output parameter window is highlighted, the display displays a plurality of non-invasive cardiac output menu options, the non-invasive cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to non-invasive cardiac output to the operator or to receive inputs from the operator to adjust processing of the signal from the non-invasive cardiac output sensor.

38. (Original) A system according to claim 37, wherein the plurality of ECG signals include eight leads which are acquired directly and four leads which are derived.

39. (Original) A system according to claim 37, wherein the plurality of ECG signals include leads I, II, III, V1, V2, V3, V4, V5, V6, aVR, aVL and aVF.

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (Canceled)

46. (Currently Amended) ~~The console of claim 45, further comprising~~ A patient monitoring console comprising:

(A) an input for a non-invasive cardiac output sensor capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient;

(B) an input for a multi-lead electrocardiogram (ECG) sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient;

(C) an analysis module coupled to the input for the non-invasive cardiac output sensor and to the input for the multi-lead ECG sensor, the analysis module configured to process the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output and configured to control a display to simultaneously display a plurality of ECG waveforms and a non-invasive cardiac output waveform;

a communication interface capable of wirelessly connecting the patient monitoring console to a local area network of a medical facility in which the patient monitoring console is located;

a communication interface capable of connecting the patient monitoring console to the local area network of the medical facility in which the patient monitoring console is located by a wired connection, wherein the patient monitoring console is configured to be automatically switched between wireless connection to the network and wired connection to the network.

a plurality of additional sensors; and

a dial operator input device,

wherein the display displays a non-invasive cardiac output parameter window and a plurality of additional parameter windows corresponding to parameters sensed by respective ones of the plurality of additional sensors;

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows, and

wherein, when the non-invasive cardiac output parameter window is highlighted, and the dial operator input device is pressed while the non-invasive cardiac output parameter window is highlighted, the display displays a plurality of non-invasive cardiac output menu options, the non-invasive cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to noninvasive cardiac output to the operator and to receive inputs from the operator to adjust processing of the signal from the non-invasive cardiac output sensor.

47. (Previously Presented) The console of claim 46, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and the plurality of menu options includes an option that causes the patient monitoring system to test placement of the first and second electrodes on the patient.

48. (Previously Presented) The console of claim 46, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and the plurality of cardiac output menu options includes a help option that causes the display to display help information describing proper electrode placement locations on the patient.

49. (Previously Presented) The console of claim 46, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and the plurality of non-invasive cardiac output menu options includes a help option that causes the display to display help information describing proper skin preparation prior to electrode placement on the patient

50. (Previously Presented) The console of claim 46, wherein the plurality of non-invasive cardiac output menu options includes an option to change a type of non-invasive cardiac output waveform that is displayed to an operator.

51. (Canceled)

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